

ZB21 Hydraulic bolter



Safety



Reliability



Productivity



Drilling equipment

Bolter hydraulics	Variable displacement piston pumps with load-sensing, for bolter head and boom movements.
Controls	Intelsense control system incorporating these features: collaring, anti-jamming, auto return to start position following hole completion, and control levers for operating bolter head.

Drilling equipment

Boom quantity		1
Boom coverage (height)	6 900 mm	22 ft 3 in
Boom coverage (width)	7 700 mm	25 ft 2 in
Boom extension	1 200 mm	3 ft 11 in
Feed extension	427 mm	1 ft 5 in
Stinger extension	452 mm	1 ft 6 in
Boom roll over		360 deg
Carousel capacity		9 bolts
Available bolt lengths		
5	1 524 mm	5 ft
6	1 829 mm	6 ft
7	2 134 mm	7 ft
8	2 438 mm	8 ft
Bolter position		Inline
Drill		
Montabert	JZD08 (8 kW), JZD10 (10 kW), or JZD12 (12kW)	
Leveling jacks		
Front (standard with unit)		2
Rear (standard with unit)		2

ZB21

Drilling electrics

ZJD08, ZJD10, ZJD12	One 56 kW(75 hp) TEFC electric motor (voltage as per application) NEMA 4 panels	
Power requirements (configuration dependent)		
380 V	64.5 kW min	106.2 kW max
440 V	66.0 kW min	106.2 kW max
480 V	64.5 kW min	106.2 kW max
525 V	64.5 kW min	106.2 kW max
575 V	64.5 kW min	106.2 kW max
Cable reel capacity (voltage dependent)		
min	75 m	246 ft
max	110 m	360 ft

Weights

Operating weight (base unit)	14,900 kg	33,220 lbs
Operating weight (fully optioned)	17,100 kg	37,620 lbs

Driving speeds forward and reverse

1st gear (0% grade)	5.0 km/h	3.1 mph
2nd gear (0% grade)	10.0 km/h	6.3mph

Powertrain

General		
Exhaust system	Diesel oxidation catalyst	
Exhaust system optional	Diesel particulate filter	
Fuel tank capacity	63 litres	17 US Gal.
Transmission		
Dana T12000 series w/ integrated torque converter		
Shifting	Powershift	
Speeds	2 forward/2 reverse	
Axles		
Front and rear	Dana 112	
Differential	No-spin	
Brakes - service	Enclosed wet disc	
Brakes - parking	Hydraulically-released/spring-applied	
Oscillation angle	+/- 7 deg	
Tires		
Solid, lugged		
Size	12.00 - 20	

Carrier hydraulics

General	Variable displacement piston pumps with load sense	
Oil tank volume	180 litres	48 US Gal.
Tank filling	Mechanical pump	
Tank filling optional	Electric pump and/or wiggins	
Steering hydraulics	Variable displacement piston pumps with load sense. Two double-acting steer cylinders.	
Brake system	Totally enclosed service brake is hydraulically-applied, spring-released on front and rear axles with automatic brake application.	

Carrier electrics

Alternator	24V/60A
Batteries	2 x 12 V
Starter	24V heavy duty
Tram lights	2 front/2 rear
Drill lights	4 front

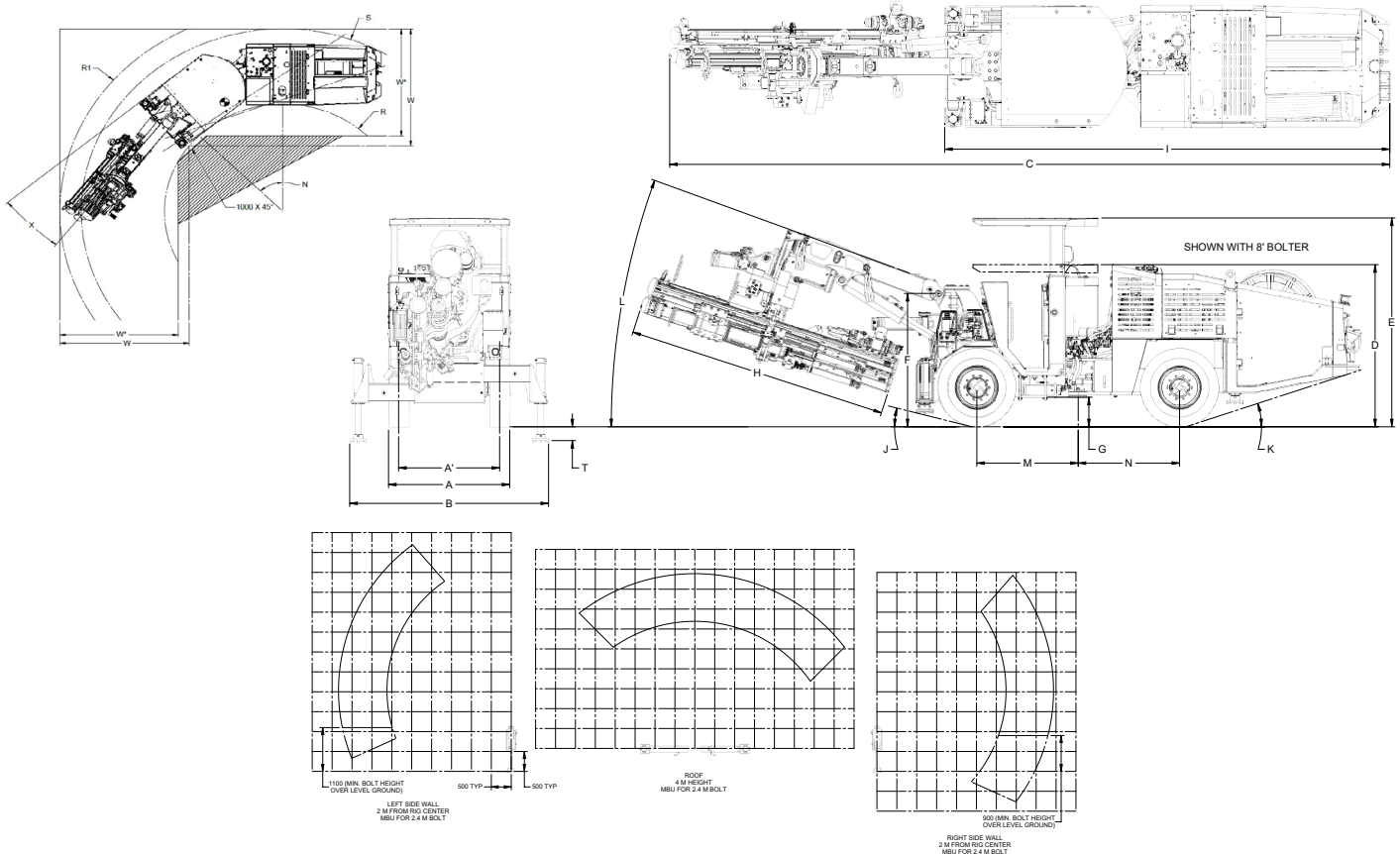
Operator console

Canopy	FOPS/ROPS certified - ISO 3449 (2005) and ISO 3471 (2008)
Cabin (optional)	FOPS/ROPS Certified Enclosed Cabin - ISO 3449 (2005) and ISO 3471 (2008)
Seat	Mechanical suspension seat

Engine specifications

Engine	Cummins QSB3.3
Certification	EPA Tier 3, MSHA
Ventilation	OHSA@100 cfm/hp = 9900 cfm MSHA-07-ENA110017 = 4000 cfm
Displacement	3.3 litres
Output	74 kW (99 hp) @2600 rpm
Maximum torque	415 Nm (306 ft-lbs) @1600 rpm
Cooling type	Water cooled, charge air cooled

General specifications



Overall dimensions

A	Maximum width	1 680 mm	5 ft 6 in
B	Maximum width with outriggers extended	2 747 mm	9 ft
C	Total length (configuration dependent)		
	Min (with 5' bolting head)	9 476 mm	31 ft 1 in
	Max (with 8' bolting head)	9 940 mm	32 ft 7 in
D	Height with canopy in collapsed position	2 210 mm	7 ft 3 in
E	Height with canopy in drill/tram position	2 852 mm	9 ft 4 in
F	Height to boom center	1 810 mm	5 ft 11 in
G	Ground clearance	381 mm	1 ft 3 in
H	Bolter length		
	Min (with 5' bolting head)	2 686 mm	8 ft 9 in
	Max (with 8' bolting head)	3 607 mm	11 ft 10 in
I	Carrier length	6 123 mm	20 ft 1 in
J	Approach angle	14 deg / 25% grade	
K	Departure angle	18 deg / 32% grade	
L	Outer boom angle	20 deg	
M	Articulation to front axle	1 400 mm	4 ft 7 in
N	Articulation to rear axle	1 400 mm	4 ft 7 in
T	Jack lift	210 mm	8 in

Minimum mine dimensions

W	90 deg aisle width	3 277 mm	10 ft 9 in
W*	chamfered corner aisle width	3 000 mm	9 ft 10 in

Turning radius

R	Inner	3 006 mm	9 ft 10 in
R1	Boom / Feed Clearance Radius	5 656 mm	18 ft 6 in
S	Outer	5 115 mm	16 ft 9 in
N	Turning Angle		40 deg
X	Boom swing angle (configuration dependent)		
	Min (with 5' bolting head)		12 deg
	Max (with 8' bolting head)		17 deg

Coverage dimensions

Sidewall coverage distance from rig center (configuration dependent)			
	Min (with 5' bolting head)	1 519 mm	4 ft 11 in
	Max (with 8' bolting head)	2 000 mm	6 ft 6 in
Roof coverage height for given bolter length (configuration dependent)			
	Min (with 5' bolting head)	3 519 mm	11 ft 6 in
	Max (with 8' bolting head)	4 000 mm	13 ft 1 in

Operating heights

Bolting head size	Operating height	Drill depth	Bolt head length	Bolt head length with 200mm x 200 mm plate option selected	Drill steel length
JZD12 or JZD08 Drifter					
5 Ft Bolting head- (Base with JZD 08)	2 880 mm	9 ft 5 in	1 630 mm	2 694 mm	2 762 mm 1 870 mm 6 ft 2 in
6 Ft Bolting head	3 178 mm	10 ft 5 in	1 935 mm	2 998 mm	3 066 mm 2 175 mm 7 ft 2 in
7 Ft Bolting head	3 471 mm	11 ft 5 in	2 240 mm	3 303 mm	3 371 mm 2 476 mm 8 ft 2 in
8 Ft Bolting head	3 779 mm	12 ft 5 in	2 545 mm	3 608 mm	3 676 mm 2 784 mm 9 ft 2 in
JZD10 Drifter					
5 Ft Bolting head- (Base with JZD 08)	3 084 mm	10 ft 1 in	1 630 mm	2 694 mm	2 762 mm 1 870 mm 6 ft 2 in
6 Ft Bolting head	3 378 mm	11 ft 1 in	1 935 mm	2 998 mm	3 066 mm 2 175 mm 7 ft 2 in
7 Ft Bolting head	3 683 mm	12 ft 1 in	2 240 mm	3 303 mm	3 371 mm 2 476 mm 8 ft 2 in
8 Ft Bolting head	3 979 mm	13 ft 1 in	2 545 mm	3 608 mm	3 676 mm 2 784 mm 9 ft 2 in

Standard and optional features

LCD dash	●
ROPS/FOPS certified canopy - ISO 3449 (2005) and ISO 3471 (2008)	●
Mechanical suspension seat	●
Joystick boom/drill controls	●
LED working lights	●
Parking brake	●
Articulation lock brace mounted to machine	●
5 ft bolter head	●
Komatsu JZD08 drifters	●
Fixed centralizers	●
5.5 kW air compressor	●
Water pump	●
Cable reel	●
Mechanical fill for hydraulic tank	●
Outriggers	●
Intelsense	●
Single 10 lb fire extinguisher	●
Water flushing	●
Back-up alarm	●
Centralized carrier lubrication station	●
Various voltages: 380V / 50Hz, 440V / 60Hz, 480V / 60Hz, 525V / 50Hz, 575V / 60Hz	○
Rear view camera	○
11 kW air compressor	○
85 m hose reel	○
Fire suppression system (manually actuated)	○
Fire suppression system (manually actuated) with Checkfire System	○
Hydro Expanding Bolt Unit	○
Pressure Washer with 20 m reel (standard finish)	○
Pressure Washer with 20 m reel (stainless steel finish)	○
Secondary 20 lb fire extinguisher	○
Electric fill for hydraulic tank	○
Wiggins fill for hydraulic tank (standalone or with electric fill)	○
Wiggins fill for fuel tank	○
Centralized greasing for boom	○
Carrier Auto lubrication system	○
Grease station with hose reel and drum pump	○
Wheel chocks with bracket	○
Drill on diesel power (available only with JZD10)	○
Fiberglass exhaust wrap	○
Wye-Delta starter	○
Cable hangers	○
Red/Green directional lights (front and rear)	○
Beacon light kit	○

Standard and optional features

Brake lights	○
Front electronic curtain	○
Jump start receptacle	○
Air/water maintenance kit	○
Rear-mounted reel control box	○
Dewatering pump ready (pump not included)	○
Abrasion resistant boom hosing	○
Trailing cable (standard, extended length with cable hangers)	○

Bolting options

Bolting heads to suit 6ft, 7ft and 8 ft bolts	○
Adjustable carousel for two bolt lengths	○
Resin injection system	○
Hydraulic centralizers	○
Mesh handler	○
Cartridge resin/cement injection system (23 mm ; 25 mm ; 28 mm ; 30 mm ; 32 mm)	○
Friction bolt options in: 33mm & 46 mm	○
Chemical bolt installation kit with Square, hex and hangar bolt driver	○
Mechanical bolt installation (hex and square drive) covering: #5; #6; #7 bolts	○

Cabin/canopy options

CB radio mount	○
CB radio antenna	○
Radio with speakers	○
Rock guard	○
Floor mat	○
Seatbelt sensor	○
Door sensor (cabin only)	○
Manual controlled spot lights (canopy only)	○
Joystick controlled spot lights (cabin only)	○

Environmental packages

Standard altitude package (Up to 3000 masl @ 40°C)	○
Corrosive environment package includes the following corrosion-resistant components: hydraulic cylinders, radiator, hose ends/fittings on all air/water lines and Nema 4X rated MCP enclosure	○
Low ambient temperature package includes corrosive environment package, low ambient cooler, oil heater, low viscosity fluids) Tram range (-40°C to +10°C), Drill range (-20°C to +10°C)	○

Flushing options

Water flushing + air blast	○
Water flushing + air blast + air mist	○

● standard equipment

○ optional equipment

Other options available - ask your Komatsu service representative

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